

Applicants : Philip C. Georgeau et al.
Appln. No. : 10/726,341
Page : 2

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (original): A roof structure for covering a roof substrate, comprising:

a waterproof membrane having a layer of fleece material disposed on a first side thereof;

a moisture curing substantially non-volatile polyether based adhesive disposed on at least a portion of said first side, at least some of said adhesive disposed within said fleece material to permit bonding of said waterproof membrane to a roof substrate of a low slope roof of a building structure.

Claim 2 (previously presented): The roof structure of claim 1, wherein:

said adhesive is a moisture cured polyether based adhesive.

Claim 3 (original): The roof structure of claim 2, including:

a metal, concrete, or wood deck; and

a layer of insulation on said deck, said waterproof membrane adhesively bonded to said insulation by parallel beads of said adhesive.

Claim 4 (previously presented): The roof structure of claim 3, wherein:

said waterproof membrane comprises a layer of EPDM rubber.

Claim 5 (original): A roof deck structure, comprising:

a rigid low slope roof structure adapted to be supported at least in part by the walls of a building, said low slope roof structure having a roof substrate;

a waterproof membrane having a layer of fleece material disposed on a first side thereof;

Applicants : Philip C. Georgeau et al.
Appln. No. : 10/726,341
Page : 3

a moisture curing substantially non-volatile polyether based adhesive disposed on at least a portion of said first side, at least some of said adhesive disposed within said fleece material and bonding said waterproof membrane to said roof substrate.

Claim 6 (original): The roof deck structure of claim 5, wherein:
said adhesive is a moisture cured adhesive.

Claim 7 (original): The roof structure of claim 6, wherein:
said waterproof membrane has a layer of EPDM rubber.

Claim 8 (previously presented): A roof deck structure, comprising:
a rigid low slope roof structure including a roof substrate;
a waterproof flexible membrane covering said roof substrate;
a moisture curing substantially non-volatile adhesive disposed between the roof substrate and the flexible membrane to thereby bond the flexible membrane to the roof substrate.

Claim 9 (previously presented): The roof deck structure of claim 8, wherein:
the adhesive comprises a polyether based adhesive.

Claim 10 (previously presented): The roof deck structure of claim 9, wherein:
the flexible membrane includes a layer of fleece matting on one side; and wherein:
at least a portion of the adhesive is disposed in the fleece.

Claim 11 (previously presented): The roof deck structure of claim 10, wherein:
the flexible membrane comprises a layer EPDM rubber having a thickness of about 0.040-0.070 inches thick.

Applicants : Philip C. Georgeau et al.
Appln. No. : 10/726,341
Page : 4

Claim 12 (previously presented): The roof deck structure of claim 11, wherein:
the fleece matting has a thickness of about 0.040-0.080 inches.

Claim 13 (previously presented): The roof deck structure of claim 8, wherein:
the flexible membrane is bonded to the roof substrate and has a bond strength of at least one hundred sixty-five pounds per square foot.

Claim 14 (previously presented): The roof deck structure of claim 13, wherein:
the adhesive has a viscosity of about 200,000 to 300,000 centipoise.

Claim 15 (previously presented): The roof deck structure of claim 8, wherein:
the roof substrate comprises fiberglass reinforced gypsum board.

Claim 16 (currently amended): ~~The roof deck structure of claim 15, wherein:~~ A roof deck structure, comprising:

a rigid low slope roof structure including a roof substrate comprising fiberglass reinforced gypsum board;

a waterproof flexible membrane covering said roof substrate;

a moisture curing substantially non-volatile adhesive disposed between the roof substrate and the flexible membrane to thereby bond the flexible membrane to the roof substrate; and wherein:

the roof deck structure includes a layer of foam insulation below the fiberglass reinforced gypsum board.

Claim 17 (currently amended): ~~The roof deck structure of claim 8, wherein:~~ A roof deck structure, comprising:

a rigid low slope roof structure including a roof substrate;

a waterproof flexible membrane covering said roof substrate;

Applicants : Philip C. Georgeau et al.
Appln. No. : 10/726,341
Page : 5

a moisture curing substantially non-volatile adhesive disposed between the roof substrate and the flexible membrane to thereby bond the flexible membrane to the roof substrate; and

~~the roof deck structure includes~~ a fluted steel deck below the foam insulation.

Claim 18 (previously presented): The roof deck structure of claim 17, including:
moisture curing adhesive bonding the foam insulation to the steel deck.

Claim 19 (previously presented): The roof deck structure of claim 8, wherein:
the adhesive includes a silyl-terminated polymer.

Claim 20 (previously presented): The roof deck structure of claim 8, wherein:
the adhesive includes an oxyalkylene polymer having at least one reactive silyl group at each end of the polymer molecule.